

KOT-0085

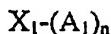
RECEIVED  
CENTRAL FAX CENTER

DEC 15 2006

IN THE CLAIMS

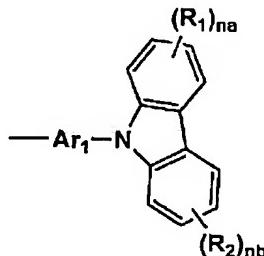
1. (Currently Amended) An organic electroluminescent element comprising an anode, a cathode and a component layer including a light emission layer, the component layer being provided between the anode and the cathode, wherein the component layer contains a compound represented by formula 1,

Formula 1



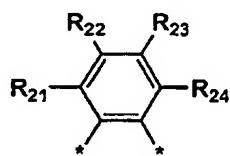
wherein  $A_1$  represents a group represented by formula 2, provided that plural  $A_1$  may be the same or different,

Formula 2

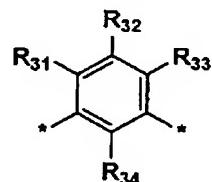


wherein  $Ar_1$  represents a divalent aromatic hydrocarbon or aromatic heterocyclic group;  $R_1$  and  $R_2$  independently represent a hydrogen atom, a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, or a halogen atom;  $na$  and  $nb$  independently represent an integer of from 1 to 4; and  $X_1$  represents a group represented by formula (b), (c), (d), (e), (f), (g), (h), (i), (j), or (k),

formula (b)



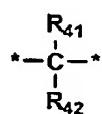
formula (c)



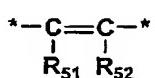
KOT-0085

KOT-0085

formula (d)



formula (e)



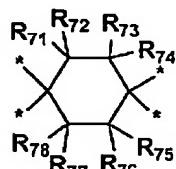
formula (f)



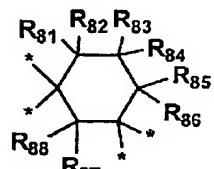
formula (g)



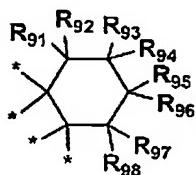
formula (h)



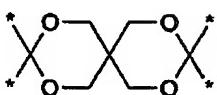
formula (i)



formula (j)



formula (k)



wherein R<sub>21</sub> through R<sub>24</sub>, and R<sub>31</sub>, R<sub>33</sub>, and R<sub>34</sub> independently represent a hydrogen atom, a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, or a halogen atom, and R<sub>32</sub> represents a hydrogen atom, a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, or a halogen atom, provided R<sub>21</sub> through R<sub>24</sub> are not simultaneously hydrogen atoms, and R<sub>31</sub> through R<sub>34</sub> are not simultaneously hydrogen atoms; R<sub>41</sub> and R<sub>42</sub> independently represent an alkyl group, provided that the total carbon atom number of the alkyl group is from 3 to 9; R<sub>51</sub> and R<sub>52</sub> independently represent a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, or a halogen atom, and R<sub>61</sub> represents a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, or a halogen atom.

KOT-0085

KOT-0085

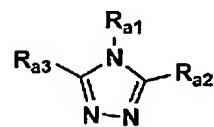
alkenyl group, or a halogen atom; R<sub>61</sub> represents an alkyl group; X<sub>a</sub> represents a divalent 6- or 7-membered monocyclic heterocyclic ring which is unsubstituted or alkyl-substituted; R<sub>71</sub> through R<sub>78</sub> independently represent a hydrogen atom, an alkyl group, or an alkoxy group; R<sub>81</sub> through R<sub>88</sub> independently represent a hydrogen atom, an alkyl group, or an alkoxy group; R<sub>91</sub> through R<sub>98</sub> independently represent a hydrogen atom, an alkyl group, or an alkoxy group; and “\*” represents a linkage site, provided that when X<sub>i</sub> represents formula (b), (c), (d), (e), (f) or (g), n is 2 ,and when X<sub>i</sub> represents formula (h), (i), (j), or (k), n is 4.

2. (Original) The organic electroluminescent element of claim 1, wherein a hole blocking layer is provided between the light emission layer and the cathode.

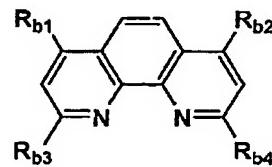
3. (Original) The organic electroluminescent element of claim 2, wherein the hole blocking layer is comprised of at least one selected from the group consisting of a styryl compound, a triazole derivative, a phenanthroline derivative, an oxadiazole derivative and a boron derivative.

4. (Original) The organic electroluminescent element of claim 2, wherein the hole blocking layer is comprised of at least one selected from the group consisting of compounds represented by formula 5, 6, 7 or 8,

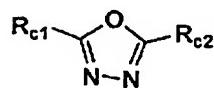
Formula 5



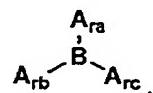
Formula 6



Formula 7



Formula 8



KOT-0085

KOT-0085

wherein R<sub>a1</sub> through R<sub>a3</sub>, R<sub>b1</sub> through R<sub>b4</sub>, and R<sub>c1</sub> and R<sub>c2</sub> independently represent an alkyl group, an aryl group or a heterocyclic group; and A<sub>ra</sub> through A<sub>rc</sub> independently represent an aryl group or a heterocyclic group.

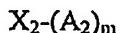
5. (Original) The organic electroluminescent element of claim 1, wherein the light emission layer contains the compound represented by formula 1 above.

6. (Original) The organic electroluminescent element of claim 1, wherein the organic electroluminescent element contains a phosphorescent compound.

7. (Original) The organic electroluminescent element of claim 6, wherein the phosphorescent compound is an osmium complex, an iridium complex or a platinum complex.

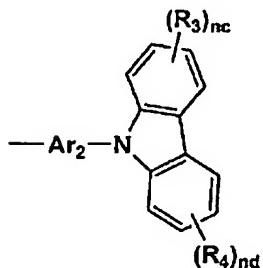
8. (Previously Presented) An organic electroluminescent element comprising an anode, a cathode and a component layer including a light emission layer, the component layer being provided between the anode and the cathode, wherein the component layer contains a compound represented by formula 3,

Formula 3



wherein A<sub>2</sub> represents a group represented by formula 4, provided that plural A<sub>2</sub> may be the same or different,

Formula 4



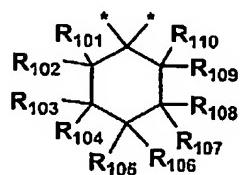
wherein Ar<sub>2</sub> represents a divalent aromatic hydrocarbon or aromatic heterocyclic group; R<sub>3</sub> and R<sub>4</sub> independently represent a hydrogen atom, a substituted or unsubstituted alkyl group, a

KOT-0085

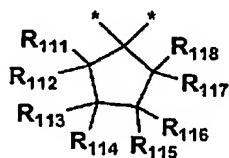
KOT-0085

substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, or a halogen atom; nc and nd independently represent an integer of from 1 to 4; m represents an integer of 2; and X<sub>2</sub> represents a group represented by formula (l), (m), (n), or (o),

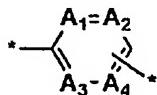
Formula (l)



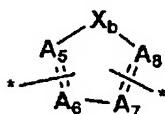
Formula (m)



Formula (n)



Formula (o)



wherein R<sub>101</sub> through R<sub>110</sub> independently represent a hydrogen atom, an alkyl group, or an alkoxy group, provided that R<sub>101</sub> through R<sub>110</sub> does not simultaneously hydrogen atoms; and any two of R<sub>101</sub> through R<sub>110</sub> do not combine with each other to form a ring; R<sub>111</sub> through R<sub>118</sub> independently represent a hydrogen atom, an alkyl group, or an alkoxy group; A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub>, and A<sub>4</sub> independently represent -C(R<sub>k1</sub>)= or -N=, in which R<sub>k1</sub> represents a hydrogen atom or an alkyl group, provided that at least one of A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub>, and A<sub>4</sub> is -N=; A<sub>5</sub>, A<sub>6</sub>, A<sub>7</sub>, and A<sub>8</sub> independently represent -C(R<sub>k2</sub>)= or -N=; X<sub>b</sub> represents

KOT-0085

KOT-0085

$-N(R_{k3})=$  or  $-Si(R_{k4})(R_{k5})-$ , which  $R_{k2}$ ,  $R_{k3}$ ,  $R_{k4}$ , and  $R_{k5}$  independently represent a hydrogen atom, a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, or a halogen atom; and "\*" represents a linkage site.

9. (Original) The organic electroluminescent element of claim 8, wherein a hole blocking layer is provided between the light emission layer and the cathode.

10. (Original) The organic electroluminescent element of claim 9, wherein the hole blocking layer is comprised of at least one selected from the group consisting of a styryl compound, a triazole derivative, a phenanthroline derivative, an oxadiazole derivative and a boron derivative.

11. (Original) The organic electroluminescent element of claim 9, wherein the hole blocking layer is comprised of at least one selected from the group consisting of compounds represented by formula 5, 6, 7 or 8 above.

12. (Original) The organic electroluminescent element of claim 8, wherein the light emission layer contains the compound represented by formula 3 above.

13. (Original) The organic electroluminescent element of claim 8, wherein the organic electroluminescent element contains a phosphorescent compound.

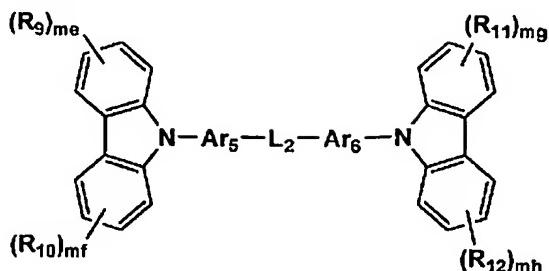
14. (Original) The organic electroluminescent element of claim 13, wherein the phosphorescent compound is an osmium complex, an iridium complex or a platinum complex.

15. (Currently Amended) An organic electroluminescent element comprising an anode, a cathode and a component layer including a light emission layer, the component layer being provided between the anode and the cathode, wherein the component layer contains a compound represented by formula, H2, H3 or H4,

KOT-0085

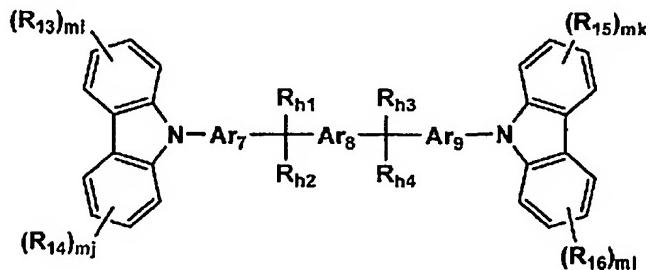
KOT-0085

## Formula H2



wherein L<sub>2</sub> represents an alkylene group having at least one fluorine atom; Ar<sub>5</sub> and Ar<sub>6</sub> independently represent a divalent aromatic hydrocarbon group or a divalent aromatic heterocyclic group; R<sub>9</sub>, R<sub>10</sub>, R<sub>11</sub>, and R<sub>12</sub> independently represent a hydrogen atom, a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, or a halogen atom; and me, mf, mg, and mh independently represent an integer of from 1 to 4,

## Formula H3



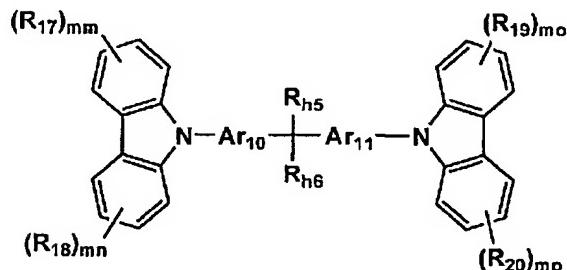
wherein Ar<sub>7</sub>, Ar<sub>8</sub> and Ar<sub>9</sub> independently represent a divalent aromatic hydrocarbon group or a divalent aromatic heterocyclic group; R<sub>h1</sub>, R<sub>h2</sub>, R<sub>h3</sub>, and R<sub>h4</sub> independently represent an alkyl group, a cycloalkyl group, an aralkyl group, an alkoxy group or a halogen atom; R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub>, and R<sub>16</sub> independently represent a hydrogen atom, a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxy group, a

KOT-0085

KOT-0085

substituted or unsubstituted aryloxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, or a halogen atom; and mi, mj, mk, and ml independently represent an integer of from 1 to 4,

Formula H4



wherein Ar<sub>10</sub> and Ar<sub>11</sub> independently represent a divalent aromatic hydrocarbon group or a divalent aromatic heterocyclic group; R<sub>hs</sub> and R<sub>h6</sub> independently represent a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, a halogen atom, or –{C(R<sub>01</sub>)(R<sub>02</sub>)<sub>p</sub>CF<sub>3</sub>, in which R<sub>01</sub> and R<sub>02</sub> independently represent a hydrogen atom or a fluorine atom, and p represents an integer of not less than 0, provided that at least one of R<sub>hs</sub> and R<sub>h6</sub> is –{C(R<sub>01</sub>)(R<sub>02</sub>)<sub>p</sub>CF<sub>3</sub>; R<sub>17</sub>, R<sub>18</sub>, R<sub>19</sub>, and R<sub>20</sub> independently represent a hydrogen atom, a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, or a halogen atom; and mm, mn, mo, and mp independently represent an integer of from 1 to 4.

16. (Original) The organic electroluminescent element of claim 15, wherein a hole blocking layer is provided between the light emission layer and the cathode.

KOT-0085

KOT-0085

17. (Original) The organic electroluminescent element of claim 16, wherein the hole blocking layer is comprised of at least one selected from the group consisting of a styryl compound, a triazole derivative, a phenanthroline derivative, an oxadiazole derivative and a boron derivative.

18. (Original) The organic electroluminescent element of claim 16, wherein the hole blocking layer is comprised of at least one selected from the group consisting of compounds represented by formula 5, 6, 7 or 8 above.

19. (Original) The organic electroluminescent element of claim 15, wherein the light emission layer contains the compound represented by formula H1, H2, H3, or H4 above.

20. (Original) The organic electroluminescent element of claim 15, wherein the organic electroluminescent element contains a phosphorescent compound.

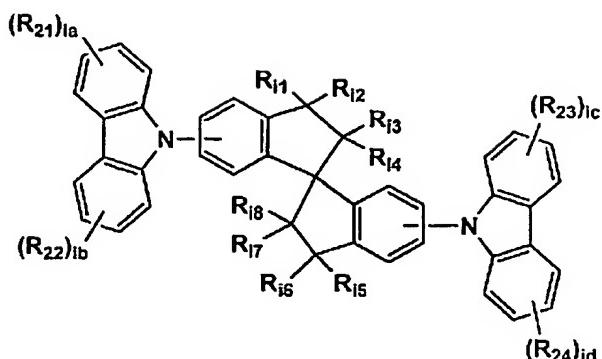
21. (Original) The organic electroluminescent element of claim 20, wherein the phosphorescent compound is an osmium complex, an iridium complex or a platinum complex.

22. (Previously Presented) An organic electroluminescent element comprising an anode, a cathode and a component layer including a light emission layer, the component layer being provided between the anode and the cathode, wherein the component layer contains a compound represented by formula I1, I2 or I3,

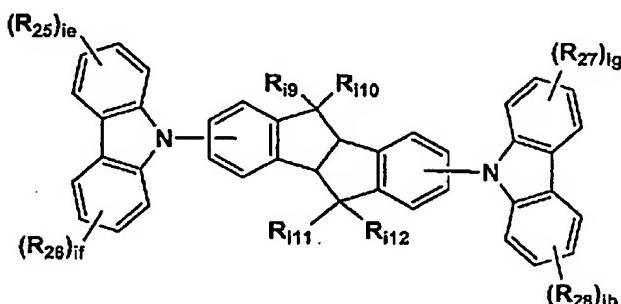
KOT-0085

KOT-0085

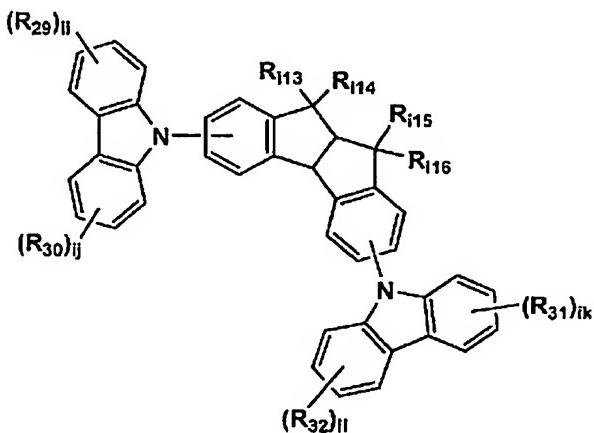
Formula I1



Formula I2



Formula I3



wherein R<sub>i1</sub>, R<sub>i2</sub>, R<sub>i3</sub>, R<sub>i4</sub>, R<sub>i5</sub>, R<sub>i6</sub>, R<sub>i7</sub>, R<sub>i8</sub>, R<sub>i9</sub>, R<sub>i10</sub>, R<sub>i11</sub>, R<sub>i12</sub>, R<sub>i13</sub>, R<sub>i14</sub>, R<sub>i15</sub>, and R<sub>i16</sub> independently represent a hydrogen atom, an alkyl group, a cycloalkyl group, an aralkyl group, an alkoxy group or a halogen atom; R<sub>21</sub>, R<sub>22</sub>, R<sub>23</sub>, R<sub>24</sub>, R<sub>25</sub>, R<sub>26</sub>, R<sub>27</sub>, R<sub>28</sub>, R<sub>29</sub>, R<sub>30</sub>, R<sub>31</sub>, and R<sub>32</sub> independently represent a hydrogen atom, a substituted or unsubstituted alkyl group, a

KOT-0085

KOT-0085

substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, or a halogen atom; and ia, ib, ic, id, ie, if, ig, ih, ii, ij, ik, and io independently represent an integer of from 1 to 4.

23. (Original) The organic electroluminescent element of claim 22, wherein a hole blocking layer is provided between the light emission layer and the cathode.

24. (Original) The organic electroluminescent element of claim 23, wherein the hole blocking layer is comprised of at least one selected from the group consisting of a styryl compound, a triazole derivative, a phenanthroline derivative, an oxadiazole derivative and a boron derivative.

25. (Original) The organic electroluminescent element of claim 23, wherein the hole blocking layer is comprised of at least one selected from the group consisting of compounds represented by formula 5, 6, 7 or 8 above.

26. (Original) The organic electroluminescent element of claim 22, wherein the light emission layer contains the compound represented by formula I1, I2 or I3 above.

27. (Original) The organic electroluminescent element of claim 22, wherein the organic electroluminescent element contains a phosphorescent compound.

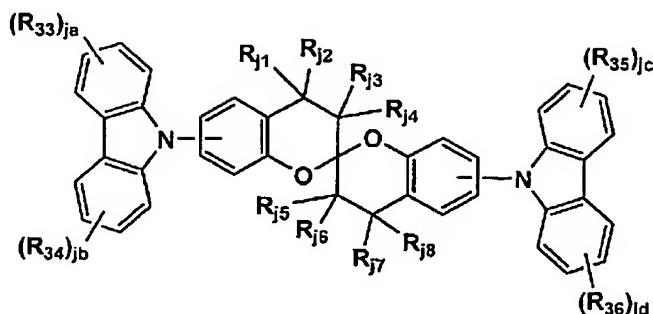
28. (Original) The organic electroluminescent element of claim 27, wherein the phosphorescent compound is an osmium complex, an iridium complex or a platinum complex.

29. (Original) An organic electroluminescent comprising an anode, a cathode and a component layer including a light emission layer, the component layer being provided between the anode and the cathode, wherein the component layer contains a compound represented by formula J1 or J2,

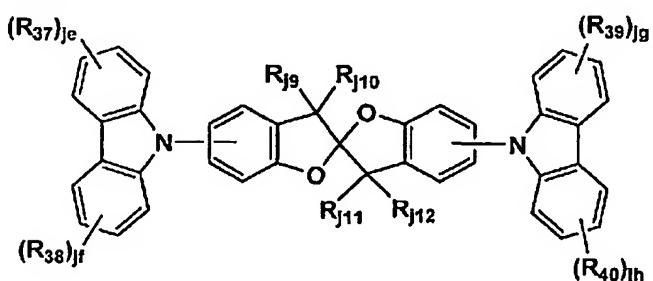
KOT-0085

KOT-0085

Formula J1



Formula J2



wherein R<sub>j1</sub>, R<sub>j2</sub>, R<sub>j3</sub>, R<sub>j4</sub>, R<sub>j5</sub>, R<sub>j6</sub>, R<sub>j7</sub>, R<sub>j8</sub>, R<sub>j9</sub>, R<sub>j10</sub>, R<sub>j11</sub>, and R<sub>j12</sub> independently represent a hydrogen atom, an alkyl group, a cycloalkyl group, an aralkyl group, an alkoxy group or a halogen atom; R<sub>33</sub>, R<sub>34</sub>, R<sub>35</sub>, R<sub>36</sub>, R<sub>37</sub>, R<sub>38</sub>, R<sub>39</sub>, and R<sub>40</sub> independently represent a hydrogen atom, a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, a cyano group, a hydroxyl group, a substituted or unsubstituted alkenyl group, or a halogen atom; and ja, jb, jc, jd, ie, jf, jg, and jh independently represent an integer of from 1 to 4.

30. (Original) The organic electroluminescent element of claim 29, wherein a hole blocking layer is provided between the light emission layer and the cathode.

31. (Original) The organic electroluminescent element of claim 30, wherein the hole blocking layer is comprised of at least one selected from the group consisting of a styryl compound, a triazole derivative, a phenanthroline derivative, an oxadiazole derivative and a boron derivative.

KOT-0085

KOT-0085

32. (Original) The organic electroluminescent element of claim 30, wherein the hole blocking layer is comprised of at least one selected from the group consisting of compounds represented by formula 5, 6, 7 or 8 above.

33. (Original) The organic electroluminescent element of claim 29, wherein the light emission layer contains the compound represented by formula J1 or J2 above.

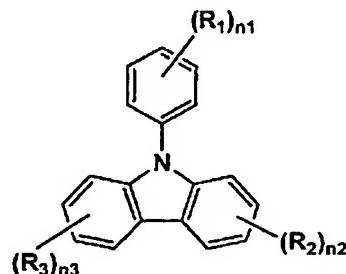
34. (Original) The organic electroluminescent element of claim 29, wherein the organic electroluminescent element contains a phosphorescent compound.

35. (Original) The organic electroluminescent element of claim 34, wherein the phosphorescent compound is an osmium complex, an iridium complex or a platinum complex.

36-42. (Canceled)

43. (Original) An organic electroluminescent element comprising an anode, a cathode and a component layer including a light emission layer, the component layer being provided between the anode and the cathode, wherein the component layer contains an electron transporting material having a phosphorescence 0-0 band of not more than 450 nm, and the light emission layer contains a phosphorescent compound and a compound represented by formula A,

Formula A



wherein  $R_1$ ,  $R_2$  and  $R_3$  independently represent a substituted or unsubstituted alkyl group or a substituted or unsubstituted cycloalkyl group;  $n_1$  represents an integer of from 0 to 5; and  $n_2$

KOT-0085

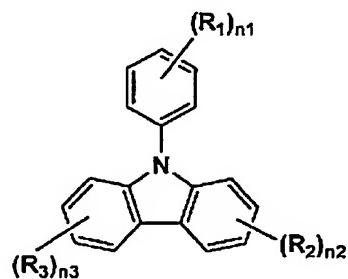
KOT-0085

and  $n_3$  independently represent an integer of from 0 to 4, provided that  $R_1$  and  $R_2$ ,  $R_1$  and  $R_3$ , or  $R_2$  and  $R_3$ , each may combine with each other to form a ring.

44. (Original) The organic electroluminescent element of claim 43, wherein the organic electroluminescent element emits a white light.

45. (Previously Presented) An organic electroluminescent element comprising an anode, a cathode and a component layer including a light emission layer, the component layer being provided between the anode and the cathode, wherein the component layer contains a hole transporting material having a phosphorescence 0-0 band of not more than 480 nm, and the light emission layer contains a phosphorescent compound and a compound represented by formula A:

Formula A



wherein  $R_1$ ,  $R_2$  and  $R_3$  independently represent a substituted or unsubstituted alkyl group or a substituted or unsubstituted cycloalkyl group;  $n_1$  represents an integer of from 0 to 5; and  $n_2$  and  $n_3$  independently represent an integer of from 0 to 4, provided that  $R_1$  and  $R_2$ ,  $R_1$  and  $R_3$ , or  $R_2$  and  $R_3$ , each may combine with each other to form a ring.

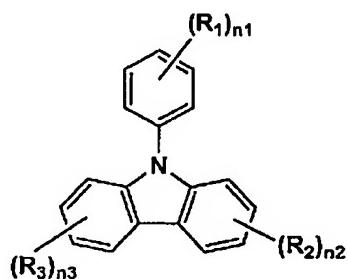
46. (Original) The organic electroluminescent element of claim 45, wherein the organic electroluminescent element emits a white light.

KOT-0085

KOT-0085

47. (Previously Presented) An organic electroluminescent element comprising an anode, a cathode and a component layer including a light emission layer, the component layer being provided between the anode and the cathode, wherein the light emission layer contains a phosphorescent compound having a phosphorescence 0-0 band of not more than 480 nm and a compound represented by formula A:

Formula A



wherein  $R_1$ ,  $R_2$  and  $R_3$  independently represent a substituted or unsubstituted alkyl group or a substituted or unsubstituted cycloalkyl group;  $n_1$  represents an integer of from 0 to 5; and  $n_2$  and  $n_3$  independently represent an integer of from 0 to 4, provided that  $R_1$  and  $R_2$ ,  $R_1$  and  $R_3$ , or  $R_2$  and  $R_3$ , each may combine with each other to form a ring.

48. (Original) The organic electroluminescent element of claim 47, wherein the organic electroluminescent element emits a white light.

49. (Previously Presented) A display comprising the organic electroluminescent element of any one of claims 1, 8, 15, 22, 29, 43, and 45.

50. (Previously Presented) An illuminator comprising the organic electroluminescent element of any one of claims 1, 8, 15, 22, 29, 43, and 45.

51. (Original) A display comprising the illuminator of claim 50, and a liquid crystal cell as a displaying element.

KOT-0085